

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1 - 28. (Cancelled)

Claim 29. (Currently Amended) A method for producing a pulse train, comprising the steps of:

providing a source of a constant amplitude, frequency modified optical signal;
providing a dispersive element;
matching a chirp of the dispersive element with a cycle of the frequency modulated signal; and

directing the signal into the dispersive element;
wherein the source is a frequency modified laser, and wherein the dispersive element is a long fiber Bragg grating.

Claim 30. (Currently Amended) The method of claim 29, wherein the source is a single longitudinal mode signal source.

Claim 31. (Canceled)

Claim 32. (New) The method of claim 29, wherein the source comprises a laser equipped with a reflective element, and wherein the signal is frequency modulated by applying a current across the reflective element.

Claim 33. (New) The method of claim 32, wherein the current modulates the center wavelength of the reflective element by way of carrier induced index changes.

Claim 34. (New) The method of claim 29, wherein said matching comprises matching the inverse of a relative delay between frequencies in each cycle of the frequency modulated signal.

Claim 35. (New) The method of claim 29, further comprising:

 sending a frequency modulated signal to the frequency modified laser, wherein a frequency of the frequency modulated signal is about 100 MHz or less.

Claim 36. (New) The method of claim 35, wherein the frequency modulated signal comprises a sawtooth wave.

Claim 37. (New) The method of claim 35, wherein the frequency modulated signal comprises a square wave.

Claim 38. (New) The method of claim 35, wherein the frequency modulated signal comprises a linear-shaped wave.

Claim 39. (New) The method of claim 29, wherein said matching further comprises matching a high order dispersion component of the dispersive element with residual nonlinear chirp.

Claim 40. (New) The method of claim 29, wherein the source comprises a non-mode-locked frequency-modified laser.